### Amendments to the Claims

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The listing of claims will replace all prior versions and listing of claims in the application:

#### **Listing of Claims:**

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5 Claim 1 (currently amended): formula:

A compound represented by the structural

or a pharmaceutically acceptable salt of said compound, wherein:

R is H, alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, cycloalkyl, cycloalkyl, akenylalkyl, alkynylalkyl, heterocyclyl, heterocyclylalkyl, heteroarylalkyl (including N-oxide of said heteroaryl), -(CHR<sup>5</sup>)n-heteroaryl,

wherein each of said alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclyl, and heteroaryl can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, cycloalkyl, heterocyclylalkyl, CF<sub>3</sub>, OCF<sub>3</sub>, CN, OR<sup>5</sup>, -NR<sup>5</sup>R<sup>10</sup>, -C(R<sup>4</sup>R<sup>5</sup>)<sub>p</sub>-R<sup>9</sup>,

-N(R<sup>5</sup>)Boc, -(CR<sup>4</sup>R<sup>5</sup>)<sub>p</sub>OR<sup>5</sup>, -C(O<sub>2</sub>)R<sup>5</sup>, -C(O)R<sup>5</sup>, -C(O)NR<sup>5</sup>R<sup>10</sup>, -SO<sub>3</sub>H, -SR<sup>10</sup>, -S(O<sub>2</sub>)R<sup>7</sup>, -S(O<sub>2</sub>)NR<sup>5</sup>R<sup>10</sup>, -N(R<sup>5</sup>)S(O<sub>2</sub>)R<sup>7</sup>, -N(R<sup>5</sup>)C(O)R<sup>7</sup> and -N(R<sup>5</sup>)C(O)NR<sup>5</sup>R<sup>10</sup>;

R<sup>2</sup> is selected from the group consisting of R<sup>9</sup>, alkyl, alkenyl, alkynyl, CF<sub>3</sub>, heterocyclyl, heterocyclylalkyl, halogen, haloalkyl, aryl, arylalkyl, heteroarylalkyl, alkynylalkyl, cycloalkyl, heteroaryl, alkyl substituted with 1-6 R<sup>9</sup> groups which can be the same or different and are independently selected from the list of R<sup>9</sup> shown below, aryl substituted with 1-3 aryl or heteroaryl groups which can be the same or different and are independently selected

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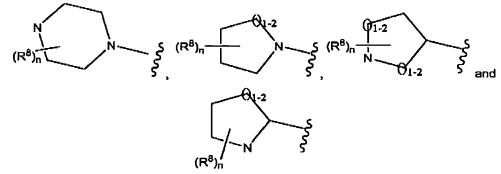
from phenyl, pyridyl, thiophenyl, furanyl and thiazolo groups, aryl fused with an aryl or heteroaryl group, heteroaryl substituted with 1-3 aryl or heteroaryl groups which can be the same or different and are independently selected from phenyl, pyridyl, thiophenyl, furanyl and thiazolo groups, heteroaryl fused

5 with an aryl or heteroaryl group,  $\{-(CH_2)_m - N - R^6\}$ 

$$V_{N-R^8}$$
  $= aryl-N$   $N-R^8$  and  $V_{N-R^8}$ 

wherein one or more of the aryl and/or one or more of the heteroaryl in the above-noted definitions for  $R^2$  can be unsubstituted or optionally substituted with one or more moletles which can be the same or different, each moiety being independently selected from the group consisting of halogen, -CN, -OR<sup>5</sup>, -SR<sup>5</sup>, -S(O<sub>2</sub>)R<sup>6</sup>, -S(O<sub>2</sub>)NR<sup>5</sup>R<sup>6</sup>, -NR<sup>5</sup>R<sup>6</sup>, -C(O)NR<sup>5</sup>R<sup>6</sup>, CF<sub>3</sub>, alkyl, aryl and OCF<sub>3</sub>;

R<sup>3</sup> is selected from the group consisting of H, halogen, -NR<sup>5</sup>R<sup>6</sup>, -OR<sup>6</sup>, -SR<sup>6</sup>, -C(O)N(R<sup>5</sup>R<sup>6</sup>), alkynyl, cycloalkyl, aryl, arylalkyl, heterocyclylalkyl, heterocyclylalkyl,



wherein each of said alkyl, cycloalkyl, aryl, arylalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyl and heterocyclylalkyl for R³ and the heterocyclyl moleties whose structures are shown immediately above for R³ can be unsubstituted or optionally independently substituted with one or more moleties which can be the same or different, each molety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, CF₃, CN, -OCF₃, -(CR⁴R⁵)<sub>p</sub>OR⁵, -OR⁵, -NR⁵R⁶, -(CR⁴R⁶)<sub>p</sub>NR⁵R⁶, -C(O₂)R⁵, -C(O)R⁵, -C(O)NR⁵R⁶, -SR⁶, -S(O₂)NR⁶, -S(O₂)NR⁵R⁶, -N(R⁵)S(O₂)R⁶, -N(R⁵)C(O)R⁷ and

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-N(R<sup>5</sup>)C(O)NR<sup>5</sup>R<sup>6</sup>, with the proviso that no carbon adjacent to a nitrogen atom on a heterocyclyl ring carries a – OR<sup>5</sup> moiety;

R4 is H, halo or alkyl;

R<sup>5</sup> is H, alkyl, aryl or cycloalkyl;

R<sup>6</sup> is selected from the group consisting of H, alkyl, alkenyl, aryl, arylalkyl, arylalkyl, arylalkenyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl, wherein each of said alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl can be unsubstituted or optionally substituted with one or more moleties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, heterocyclylalkyl, CF<sub>3</sub>, OCF<sub>3</sub>, CN, -OR<sup>5</sup>, -NR<sup>6</sup>R<sup>10</sup>, -C(R<sup>4</sup>R<sup>5</sup>)<sub>p</sub>-R<sup>9</sup>, -N(R<sup>5</sup>)Boc, -(CR<sup>4</sup>R<sup>5</sup>)<sub>p</sub>OR<sup>5</sup>, -C(O<sub>2</sub>)R<sup>5</sup>, -C(O)R<sup>5</sup>, -C(O)NR<sup>5</sup>R<sup>10</sup>, -SO<sub>3</sub>H, -SR<sup>10</sup>, -S(O<sub>2</sub>)R<sup>7</sup>, -S(O<sub>2</sub>)NR<sup>5</sup>R<sup>10</sup>, -N(R<sup>5</sup>)S(O<sub>2</sub>)R<sup>7</sup>, -N(R<sup>5</sup>)C(O)R<sup>7</sup> and -N(R<sup>5</sup>)C(O)NR<sup>5</sup>R<sup>10</sup>;

R<sup>10</sup> is selected from the group consisting of H, alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyl, and heterocyclyl, wherein each of said alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyl, and heterocyclylalkyl, heterocyclylalkyl, heterocyclylalkyl, and heterocyclylalkyl can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, heterocyclylalkyl, CF<sub>3</sub>, OCF<sub>3</sub>, CN, -OR<sup>5</sup>, -NR<sup>4</sup>R<sup>5</sup>, -C(R<sup>4</sup>R<sup>5</sup>)<sub>p</sub>-R<sup>9</sup>, -N(R<sup>5</sup>)Boc, -(CR<sup>4</sup>R<sup>5</sup>)<sub>p</sub>OR<sup>5</sup>, -C(O<sub>2</sub>)R<sup>5</sup>, -C(O)NR<sup>4</sup>R<sup>5</sup>, -C(O)R<sup>5</sup>, -SO<sub>3</sub>H, -SR<sup>5</sup>, -S(O<sub>2</sub>)R<sup>7</sup>, -S(O<sub>2</sub>)NR<sup>4</sup>R<sup>6</sup>, -N(R<sup>5</sup>)S(O<sub>2</sub>)R<sup>7</sup>, -N(R<sup>5</sup>)C(O)R<sup>7</sup> and -N(R<sup>5</sup>)C(O)NR<sup>4</sup>R<sup>6</sup>;

or optionally (i) R<sup>5</sup> and R<sup>10</sup> in the moiety –NR<sup>5</sup>R<sup>10</sup>, or (ii) R<sup>5</sup> and R<sup>6</sup> in the moiety –NR<sup>5</sup>R<sup>6</sup>, may be joined together to form a cycloalkyl or heterocyclyl moiety, with each of said cycloalkyl or heterocyclyl moiety being unsubstituted or optionally independently being substituted with one or more R<sup>9</sup> groups;

R<sup>7</sup> is selected from the group consisting of alkyl, cycloalkyl, aryl, arylalkenyl, heteroaryl, arylalkyl, heteroarylalkyl, heteroarylalkenyl, and heterocyclyl, wherein each of said alkyl, cycloalkyl, heteroarylalkyl, aryl, heteroaryl and arylalkyl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different,

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each molety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl,  $CF_3$ ,  $OCF_3$ , CN,  $-OR^5$ ,  $-NR^5R^{10}$ ,  $-CH_2OR^5$ ,  $-C(O_2)R^5$ ,  $-C(O)NR^5R^{10}$ ,  $-C(O)R^5$ ,  $-SR^{10}$ ,  $-S(O_2)R^{10}$ ,  $-S(O_2)NR^5R^{10}$ ,  $-N(R^5)S(O_2)R^{10}$ ,  $-N(R^5)C(O)R^{10}$  and  $-N(R^5)C(O)NR^5R^{10}$ ;

 $R^8$  is selected from the group consisting of  $R^6$ ,  $-OR^6$ ,  $-C(O)NR^5R^{10}$ ,  $-S(O_2)NR^5R^{10}$ ,  $-C(O)R^7$ ,  $-C(=N-CN)-NH_2$ ,  $-C(=NH)-NHR^5$ , heterocyclyl, and  $-S(O_2)R^7$ ;

 $R^9$  is selected from the group consisting of halogen, -CN, -NR<sup>5</sup>R<sup>10</sup>, -C(O<sub>2</sub>)R<sup>6</sup>, -C(O)NR<sup>5</sup>R<sup>10</sup>, -OR<sup>6</sup>, -SR<sup>6</sup>, -S(O<sub>2</sub>)R<sup>7</sup>, -S(O<sub>2</sub>)NR<sup>5</sup>R<sup>10</sup>, -N(R<sup>5</sup>)S(O<sub>2</sub>)R<sup>7</sup>, -N(R<sup>5</sup>)C(O)NR<sup>5</sup>R<sup>10</sup>;

m is 0 to 4;

n is 1 to 4; and

p is 1 to 4,

with the proviso that when  $R^2$  is phenyl,  $R^3$  is not alkynyl or halogen, and that

when R<sup>2</sup> is aryl, R is not \( \frac{\xi}{2} \) ——(CHR<sup>5</sup>)<sub>n</sub>— NR<sup>5</sup>R<sup>8</sup>, and with the further proviso that when R is arylalkyl, then any heteroaryl substituent on the aryl of said arylalkyl contains at least three heteroatoms.

Claim 2 (previously presented): The compound of claim 1, wherein R is

-(CHR<sup>5</sup>)<sub>n</sub>-heteroaryl, alkyl, cycloalkyl, heterocyclyl, or heteroarylalkyl (including N-oxide of said heteroaryl), wherein each of said alkyl, aryl, cycloalkyl, heterocyclyl and heteroaryl can be unsubstituted or optionally substituted with one or more moieties as stated in claim 1;

R<sup>2</sup> is halogen, alkyl, haloalkyl, CN, cycloalkyl, heterocyclyl or alkynyl; R<sup>3</sup> is H, aryl, heteroaryl, cycloalkyl, -NR<sup>5</sup>R<sup>6</sup>,

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wherein said alkyl, aryl, heteroaryl, cycloalkyl and the heterocyclyl structures shown immediately above for R<sup>3</sup> are optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, CF<sub>3</sub>, OCF<sub>3</sub>, lower alkyl, CN, -C(O)R<sup>5</sup>, -S(O<sub>2</sub>)R<sup>5</sup>, -C(=NH)-NH<sub>2</sub>, -C(=CN)-NH<sub>2</sub>, hydroxyalkyl, alkoxycarbonyl, -SR<sup>5</sup>, and OR<sup>5</sup>, with the proviso that no carbon adjacent to a nitrogen atom on a heterocyclyl ring carries a – OR<sup>5</sup> moiety;

R<sup>4</sup> is H or lower alkyl; R<sup>5</sup> is H, lower alkyl or cycloalkyl;

n is 1 to 2; and

p is 1 or 2.

15 Claim 3 (previously presented): The compound of claim 2, wherein R is hydroxyalkyl, or -(CHR<sup>5</sup>)<sub>n</sub>-heteroaryl, wherein each of said aryl and heteroaryl is unsubstituted or substituted with one or more groups which can be the same or different, each group being independently selected from the group consisting of heteroaryl, amine, heterocyclyl, -C(O)N(R<sup>5</sup>R<sup>6</sup>), -S(O<sub>2</sub>)R<sup>5</sup>,

20  $-S(O_2)N(R^5R^6)$ , alkoxy and halo.

Claim 4 (original): The compound of claim 2, wherein R<sup>2</sup> is Br, Cl, CF<sub>3</sub>, CN, lower alkyl, cyclopropyl, alkynyl, alkyl substituted with -OR<sup>6</sup> or tetrahydrofuranyl.

Claim 5 (previously presented): The compound of claim 2, wherein R<sup>3</sup> is H,

25 aryl, heteroaryl, cycloalkyl,

wherein each of said alkyl, aryl, heteroaryl, cycloalkyl and the heterocyclyl structures shown immediately above for R<sup>3</sup> are optionally substituted with one or more moleties which moieties can be the same or different, each moiety being independently selected from the group consisting of halogen, CF<sub>3</sub>, OCF<sub>3</sub>, lower alkyl, CN and OR<sup>5</sup>, with the proviso that no carbon adjacent to a nitrogen atom on a heterocyclyl ring carries a – OR<sup>6</sup> moiety.

10 Claim 6 (original): The compound of claim 2, wherein R<sup>4</sup> is H or lower alkyl.

Claim 7 (original): The compound of claim 2, wherein R<sup>5</sup> is H.

Claim 8 (original): The compound of claim 2, wherein n is 1.

Claim 9 (original): The compound of claim 1, wherein p is 1.

Claim 10 (previously presented): The compound of claim 2, wherein R is

15 hydroxyalkyl.

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Claim 11 (original): The compound of claim 2, wherein R is pyrid-3-ylmethyl, wherein said pyridyl may be unsubstituted or optionally independently substituted with one or more moieties as stated in claim 1.

Claim 12 (original): The compound of claim 2, wherein R is pyrid-4-ylmethyl,

wherein said pyridyl may be unsubstituted or optionally independently substituted with one or more moleties as stated in claim 1.

Claim 13 (original): The compound 2, wherein R is the N-oxide of pyrid-2-ylmethyl, pyrid-3-ylmethyl, or pyrid-4-ylmethyl, wherein each of said pyridyl may be unsubstituted or optionally independently substituted with one or more

25 moieties as stated in claim 1.

Claim 14 (original): The compound of claim 4, wherein said R<sup>2</sup> is Br.

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Claim 15 (original): The compound of claim 4, wherein said R<sup>2</sup> is Cl.

Claim 16 (original): The compound of claim 4, wherein R<sup>2</sup> is ethyl.

Claim 17 (original): The compound of claim 4, wherein R<sup>2</sup> is cyclopropyl.

Claim 18 (original): The compound of claim 4, wherein R<sup>2</sup> is ethynyl.

5 Claim 19 (previously presented): The compound of claim 2, wherein R<sup>3</sup> is cycloalkyl, heterocyclyl, aryl or –N(R<sup>5</sup>R<sup>6</sup>).

Claim 20 (previously presented): The compound of claim 19, wherein R<sup>3</sup> is heterocyclyl.

Claim 21 (original): The compound of claim 19, wherein R<sup>3</sup> is cyclohexyl or norbornyl wherein each of said cyclohexyl or norbornyl can be unsubstituted or substituted with one or more moleties which can be the same or different, each moiety being independently selected from the group consisting of alkyl and hydroxyalkyl.

Claim 22 (original): The compound of claim 19, wherein R<sup>3</sup> is unsubstituted 15 phenyl.

Claim 23 (original): The compound of claim 19, wherein  $R^3$  is a phenyl substituted with one or moieties which can be the same or different, each moiety being independently selected from the group consisting of F, Br, Cl and  $CF_3$ .

Claim 24 (original): The compound of claim 19, wherein R<sup>5</sup> of said –N(R<sup>5</sup>R<sup>6</sup>) is H or hydroxyalkyl, and R<sup>6</sup> of said –N(R<sup>5</sup>R<sup>6</sup>) is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl and methylenedioxy, wherein each of said alkyl and cycloalkyl can be unsubstituted or substituted with one or more moletles which can be the same or different, each molety being

25 Independently selected from the group consisting of amine, ethoxycarbonyl, amide, hydroxyalkyl, hydroxy,

Claim 25 (original): The compound of claim 19, wherein R<sup>5</sup> and R<sup>6</sup> of said –N(R<sup>5</sup>R<sup>6</sup>) are joined together to form a heterocyclyl molety, wherein said heterocyclyl molety can be unsubstituted or optionally independently

substituted with one or more groups which can be the same or different, each group being selected from the group consisting of hydroxyalkyl, amide,

-C(O)R<sup>5</sup>, >C(CH<sub>3</sub>)<sub>2</sub>, -S(O<sub>2</sub>)R<sup>5</sup>, -S(O<sub>2</sub>)N(R<sup>5</sup>R<sup>6</sup>), -C(=NH)N(R<sup>5</sup>R<sup>6</sup>) and

-C(=N-CN)N(R5R6).

Claim 26 (original): The compound of claim 25, wherein said heterocyclyl moiety formed by R<sup>5</sup> and R<sup>6</sup> is a pyrrolidine or piperidine ring.

Claim 27 (currently amended): A compound of the formula:

19 но HN NH<sub>2</sub> Br HŅ HN' SO<sub>2</sub>CH<sub>3</sub> 'nн \$02NH2

21 NH<sub>2</sub>

or a pharmaceutically acceptable salt thereof.

5 Claim 28 (currently amended): A compound of the formula:

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or a pharmaceutically acceptable salt thereof.

Claim 29 (currently amended): A compound of the formula:

or a pharmaceutically acceptable salt thereof.

5 Claim 30 (currently amended): A compound of the formula:

or a pharmaceutically acceptable salt thereof.

Claim 31-39: cancelled.

Claim 40 (previously presented): A pharmaceutical composition comprising at least one compound of claim 1 in combination with at least one

- 5 pharmaceutically acceptable carrier.
  - Claim 41 (currently amended): The pharmaceutical composition of claim <u>40</u> 38, additionally comprising one or more anti-cancer agents selected from the group consisting of cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, CPT-11, irinotecan, camptostar, topotecan, paclitaxel, docetaxel,
- epothilones, tamoxifen, 5-fluorouracil, methoxtrexate, 5FU, temozolomide, cyclophosphamide, SCH 66336, R115777, L778,123, BMS 214662, Iressa, Tarceva, antibodies to EGFR, Gleevec, intron, ara-C, adriamycin, cytoxan, gemcitabine, Uracil mustard, Chlormethine, Ifosfamide, Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine,
- Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine, Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine, 6-Thioguanine, Fludarabine phosphate, Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin, Deoxycoformycin, Mitomycin-C, L-Asparaginase,
- Teniposide 17α-Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone, Fluoxymesterone, Dromostanolone propionate, Testolactone, Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone, Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide, Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide,
- Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, CPT-11, Anastrazole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or Hexamethylmelamine.
  - Claim 42 (original): A compound of claim 1 in purified form.
- 30 Claim 43-47: cancelled.

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